RoadSensors newsletter

March 2014

It is time for a new edition of the DELTA RoadSensors newsletter. We are now three month into 2014 and business have been off to a good start – hopefully the beginning of another successful business year.

LTL-X & LTL-XL update

DELTA has been investigating the battery capacity of LTL-X and LTL-XL. Using fresh and fully charged batteries, LTL-X will be able to last 2,500 - 2,600 measurements. LTL-XL shows a lower capacity of 900 - 1,000 measurements, the lower figure being a result of additional consumption by the servo (to switch between R_L and Qd measurements), the Qd light and the colour display – and not least that actually two measurements (R_L and Qd) instead of just one are performed per measurement.

DELTA has started a project to include a battery offering higher capacity aiming at increasing the number of measurements per battery charge.

DELTA has launched the first version of the LTL-XL demonstration video. We still miss to include a section on installation and use of the LTL-XL software. This part will follow during the second quarter of 2014.

You can access the video at the following link: http://www.madebydelta.com/delta/Business_units/LO/Reflectometer/LTL-XL.page?Business_units/LO/Reflectometer/LTL-XL.page

LTL-M updates

From the LTL-M test on various marking types.

As mentioned in a recent newsletter from December 2013, DELTA has made many tests during 2013 to document the performance of the LTL-M system. In one test carried out in Sweden, we have compared the performance of LTL-M against hand-held retroreflectometers.

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Averages	
Average **absolute** measurement error of hand-held:	**1,4 %**
Average **systematic** measurement error of hand-held:	**-0.5 %**
Average **absolute** measurement error of mobile:	**2,5 %**
Average **systematic** measurement error of mobile:	**3,1 %**
Average **repeatability** measurement error of mobile:	**1,1 %**

The results show a high correlation between the two types of instruments and safely within the claim for the LTL-M system of a typical re-peatability of +/-3 % and a typical reproducibility of +/- 5 %. I have attached a copy of the report for your attention.

Marking thickness gauge

DELTA has now received the first shipment of the new marking thickness gauge and we are ready to offer the product. It comes in a solid transportation box. The list price for the gauge will be EUR 1,000 per unit, item number LS102284.

I have attached the user manual for your attention, it will be provided with the instrument as a A5 booklet.

Marketing

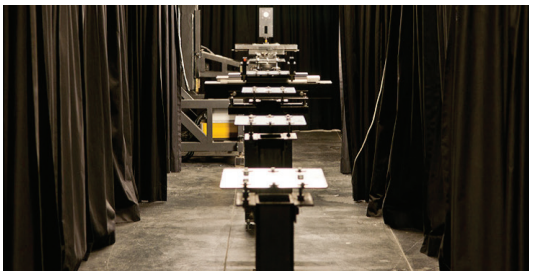
DELTA has during first quarter updated all our product information material, product feature leaflets and specifications, in the English language version. We are currently looking into updating the same in the different languages we have available. We may come back and ask you for assistance on this matter.

You are able to access the updated papers on road-sensors.com under Products. If you need the original text or pictures used for your own material please let me know and I will arrange for it.

In parallel DELTA is working on structuring our picture database including plans of adding new pictures to the database. Later in the year we plan to make this database easily accessible to our partners together with the planned launch of a new DELTA website – the pictures are planned to be made accessible through a log-in protected section of the website.

New set-up for calibration certificates

As informed at the beginning of January, DELTA has implemented a new calibration set-up where DELTA delivers free-of-charge DANAK accredited calibration certificates for new instruments, re-calibration and purchase of new calibration references. This is a result of automation in our accredited lab for light measurements.



In this context, DELTA wants to emphasise the need of a daily routine for field calibration of the instrument - to be performed by the users - as well as the need of ensuring re-calibrations of the instrument's calibration reference, alternatively acquiring new calibration references. DELTA recommends the re-calibration or puchase of a new unit of the instrument's reference to be done at least every second year or more frequently.

Additional re-calibration of the calibration reference is required, e.g. if the calibration reference has been damaged or if it has become dirty after cleaning. Have a look for further information at the FAQ section at roadsensors.com.

The option of customer purchasing a new calibration reference is a significant advantage over the service provided by Zehntner, where customers have to return the calibration reference as well as the instrument for service at Zehntner in Switzerland every second year.

Meet us at Intertraffic

As many of you are aware DELTA will again this year be exhibiting at Intertraffic in Amsterdam, 25 - 28 March. We will be at stand 05.217 together with our partrners from Pavement Alliance. Come and see us if you plan to visit Intertraffic.

EU Seminar

In November DELTA participated in an EU seminar titled 'Developing safe, efficient and connected mobility'. The seminar looked at developing safer traffic to meet the EU goal for 2020 to reduce by 50 % the number of persons injured fatally in road accidents. One of the solutions discussed was 'Lane Departure Warning Systems', an electronic system installed in vehicles which is able to read markings and in this way help keep the vehicle correctly situated on the road, avoiding head-on collisions.

More information on the seminar is available at this link: http://www.fiaregion1.com/download/dsecm/connected_mobility_brussels.pdf

In parallel, ERF (European Union Road Federation) has launched a position paper entitled 'Marking the way towards a safer future' with the purpose of having the performance level of markings lifted to the level stated in the European standards. ERF (http://www.irfnet.eu/) is a pan-European organisation which coordinates the views of Europe's road sector and acts as a platform for dialogue and research on mobility issues.

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25 – 28 March 2014
Intertraffic 2014
Amsterdam RAI
Netherlands
Visit us in hall 5
Stand no 05.217

Read more

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RoadSensors newsletter

May 2014

Four months into the 2014 season it is time for the next round of news from DELTA. Like in 2013 we have seen sales slightly on the low side so far this year compared to our expectations. We, however, expect shortly sales of a few LTL-M systems making us optimistic on reaching the sales budget for at least the first six months of 2014.

Software upgrade, LTL-XL & RetroSign

DELTA has recently made upgrade to the LTL-X, LTL-XL and RetroSign RSC (Road Sensor Control) software to optimize their compatibility with Windows 7 and 8. The software packs contains the necessary driver together with the RSC software itself. When installing the software the pack will automatically check the type of PC (32 or 64 bit) and choose the correct version of the driver and install the software in one process by just clicking on the link.

The updates software will be provided with new instruments and can be downloaded from www.roadsensors.com under Products and the respective instruments. The software is called by product name and "software pack".

LTL-M

DELTA has finalized the development of white and red warning light for the LTL-M system. New orders will be delivered with the warning light.

DELTA is shortly expecting the fifth order for a LTL-M system from our main LTL-M customer Ramböll, a Swedish service provider. Ramböll is ready to retire their last Ecodyn mobile system and see in parallel new business opportunities adding another LTL-M to their fleet.

DELTA is this year focusing the LTL-M sales activities first of all on potential customers in the Middle East and Southeast Asia with opportunities in East Asia and Central & North America.

Marking Thickness Gauge

As mentioned in the previous Newsletter DELTA now stock the Marking Thickness Gauge (MTG). The MTG is used to measure the thickness of road markings. Since the last Newsletter we have made a product leaflet, see attachment to the e-mail. If you need to have the leaflet translated please forward the translated text in a word document and DELTA will prepare the leaflet in your language.

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You are able to locate the Product Leaflet and User Manual on the MTG on www.roadsensors.com under Products

New service and repair order forms

DELTA has revised the current service and repair order form and separated it in two forms: one for hand-held instruments and one for LTL-M. I have attached a copy of both forms to the e-mail for you attention. Please use these forms when you need to order instrument service or repair.

I want again to highlight the new procedure when you order service or repair. DELTA has implemented a RMA (Return Material Authorisation) number system to better keep track on what instrument we can expect and what are the actions we have to take when received. You need to request from DELTA the RMA number in advance of sending the instrument, this information is to be included on the revised forms and all additional communication.

Exhibitions

DELTA has since the most recent Newsletter in March participated in two exhibitions.

LHG Winter OPS in Lycksele, Sweden

The Winter OPS conference saw participation of more than 20 primarily medium and large European airports. The conference was arranged by LHG, a daughter company of ASFT, one of our Pavement Alliance partners. The Winter OPS conference gave DELTA the chance to meet airports over three days in the north of Sweden allowing time to both formal presentations and informal discussions.

Even if retroreflection measurements are not often seen in airports at the moment, new FAA guidelines planned issued late 2014 are said to provide for the first time minimum retroreflection levels of markings probably forcing airport to put more attention to this field. At least some of the airports attending the event seemed to consider retroreflection measurements.

We had the pleasure to meet many of you during the Intertraffic exhibition end of March. The event and DELTA's stand was well visited and we were pretty busy during the first three days. As expected the 4th day was slow but left time to visit other companies stands checking out on the latest news.

DELTA shared this time a stand with our three Pavement Alliance partners ASFT, ARRB and Grontmij. This allowed us more space but we probably also compromised on the visibility of the DELTA name. We have decided to exhibit next time in 2016 again with our PA partners but we will ensure a much clearer visibility of each company at that event.

The 4th Road Safety Action Program

The current EU road Safety action program running from 2011 – 2020 with the goal of reducing the number of fatalities on European roads by 50% has come off to a good start. The overall decrease in fatalities the two first years in the 28 member countries has been 9% and 8% respectively. Even with a successful start of the new program there is still many lives lost on European roads, in 2010 the figure was 31.000 persons.

A press release on the results so far has been attached to the e-mail for your attention.

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RoadSensors newsletter

August 2014

The Danish summer is normally unpredictable, a good one offers many days above 20 degrees, a bad one too many days below. This summer has so far been fantastic with sunny, warm and dry weather. You will find your team at DELTA well re-charged to service you again after our summer break.

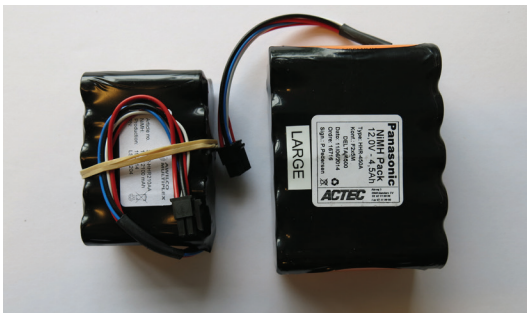
LTL-XL, Hi-Power battery

As mentioned in the March 2014 newsletter DELTA has been working on a solution offering larger battery capacity for LTL-XL. The new high capacity battery is now available as an option for LTL-XL instruments from serial number 369 as well as being an option for rebuilding older LTL-XL models with serial number below 369.

The current standard battery solution with a battery capacity of 2.1 Ah provides approx. 900 measurements for LTL-XL on a new and fully charged battery.

The new Hi-Power battery offers a capacity of 4.5 Ah and will on a LTL-XL with a new and fully charged battery provide approx. 2,200 measurements. If your customer would like the Hi-Power battery solution it needs to be ordered separately with item number LS 102308. The Hi-Power battery costs EUR 200 per piece or EUR 108 if swapped with the standard battery.

DELTA will be able to rebuild existing LTL-XL instruments with serial number below 369 to work with the Hi-Power battery. We will adapt the battery holder compartment and upgrade the software. The cost for such an upgrade will be EUR 350 including the new battery plus shipment cost.



Remember that the batteries delivered by DELTA for LTL-XL (and LTL-X) are specially manufactured to ensure compliance with legal requirements and user safety – do not use non-DELTA supplied batteries.

LTL-X & LTL-X pressure test

Due to the interest of using DELTA's instruments at high altitude we have decided to test LTL-X and LTL-XL in a pressure chamber. In the test the instrument performance at altitudes up to 4,000 m above sea level was tested with no problems encountered.

LTL-XL, servo motor

DELTA has identified a problem with our previously used servo motor for LTL-XL, some of the units did break faster than expected. The servo motor switches

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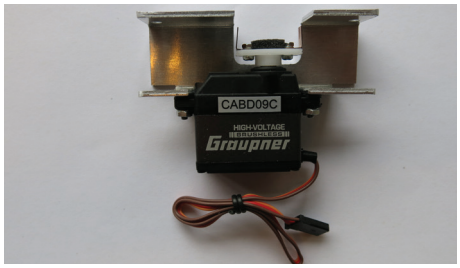
between the R_L and Qd and causes the sound you hear between the two measurements.



In the recent months DELTA has tested and approved a new digital servo motor which we now use in the production of LTL-XL.

LTL2000S / SQ

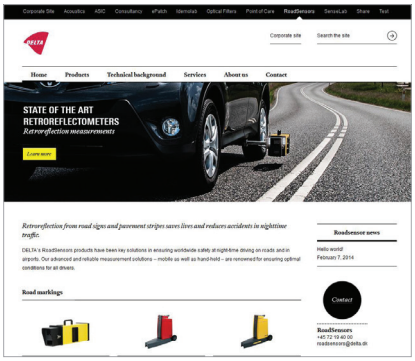
The LTL2000S / SQ instruments have been on the market since the 90s with production terminated early 2008. DELTA has so far been able to service these instruments but our stocks of parts for repair is slowly but surely diminishing. One part where we are close to zero stock is the print board where we will not be able to produce additional boards due to lack of single components.

With this in mind DELTA has decided to stop servicing LTL2000S / SQ instruments by the end of 2015. We have decided to give you a long notice, so you can start informing your customers about the situation. This is, on the other hand, also an opportunity to promote LTL-XL. If you are interested we can prepare a LTL-XL campaign before the 2015 season offering during a time limited period a buy-back program, i.e. offer an LTL-XL at a reduced price in return for taking their old instrument back. Let me know your interests and we can review such a program further during the autumn.

New website

Roadsensors will during August launch a redesigned website. The website address will be the same as now: roadsensors.com as will most of the contents. The software used for design of the website will allow us to work out a password protected section on the site which we plan to introduce during the autumn.

This section will provide general and customer-specific information in relation to being a DELTA business partner. We will provide further information on this section during the autumn.



Safety-based approach to pavement markings

Texas A&M Transportation Institute (TTI) informed in a press release in May that they have identified a technique for developing safety-based retroreflectivity criteria for pavement markings. The technique quantifies the link between pavement marking retroreflectivity and nighttime safety.

The research is based on actual data regarding nighttime crashes and measured retroreflectivity levels. The target of the research is to be able to define a point at which retroreflectivity of the centerline is most effective from a safety point of view. TTI is currently acquiring additional field data sets for further testing and validation before they release the method.

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RoadSensors newsletter

December 2014

The last quarter of the year is soon coming to an end and we are facing a new year with probably many challenges but equally many opportunities. DELTA's road safety business 2014 has been an OK year but with moderate growth and with a promising outlook for 2015 especially looking at several very interesting LTL-M sales leads in the pipeline.

Prices 2015

Last week you have been forwarded the price lists for 2015. In general, DELTA has decided to keep prices in line with the current year prices taking the competitive conditions in the market into consideration.

Handheld instruments

We have added the option of purchasing a Hi-Power battery for LTL-XL increasing the number of measurement on a fully charged battery from 1.000 to > 2.000 measurements.

We have added the Marking Thickness Gauge (MTG) to the price list. The MTG is a 3rd party product with low margin. As a result we have decided to reduce the margin to our dealers to 15%. For this specific product our dealer price is EUR 850 and the suggested market price EUR 1,000 effective from 1 January 2015.

LTL-M

Again, prices have been kept unchanged and we have added some further spare parts to the list. However, we have had to increase the cost of instrument service as we have seen the time needed for a LTL-M service is much longer compared to a hand-held device.

The LTL-M price list has been divided into two:

1. Prices for LTL-M system and spare parts
2. Prices for LTL-M Rental

We have not forwarded the LTL-M prices to all of you but those of you needing them please contact Kjeld.

Instrument service & repair

Checking the actual time used to carry out instrument service of different models we have seen that in particular old models like LTL2000 series, RetroSign 4000 series and Qd30 take longer time to service than currently budgeted. Because of this we have decided in increase the cost of a standard instrument service to EUR 950 for such instruments, current cost is EUR 600. Please remember that DELTA in the newsletter of August 2014 informed that DELTA will stop servicing the LTL2000 series by the end of 2015. We will still be able to offer a standard instrument service but will have limited capability offering repairs due to lack of components.

For instrument service of current hand-held models (LTL-X, LTL-XL, RetroSign GR1 & GR3), the cost of a standard service will increase to EUR 700 after having had no price adjustment during the recent 6 years.

DELTA has decided to introduce a fee of EUR 250 for checking instruments sent for repair not asking for a maintenance service. If service is ordered this fee will not apply. The same fee will be applied if a customer does not want to have a repair done after having the instrument checked by DELTA. This could be because DELTA is

not able to repair or the cost of repair is evaluated by the customer to be too high.

For your attention I have attached the revised instrument service order forms, the adjusted prices, effective from 1 January 2015.

Web-site

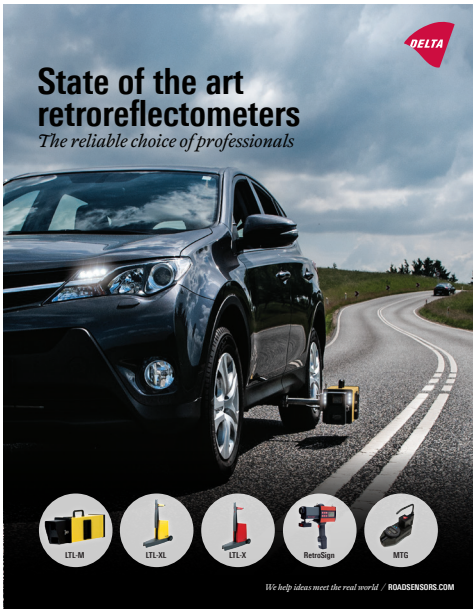
Since the recent newsletter in August DELTA has launched our new web-site. Please have a look at: www.roadsensors.com.

We plan during 1st quarter of 2015 to launch a password protected section where our partners will be able to access information which we do not normally share with our direct customers.

Adverts & articles

DELTA has recently updated the advert promoting our instruments.

If you like to use the advert please let Kjeld know and we will forward it in your local language and in the format you need.



DELTA has written the article "Lines of Duty" for the 2015 edition of Intertraffic World Show-case launched a few weeks ago. I have attached the article for your attention. The article is based upon a 2013 study comparing the performance of hand-held instruments and LTL-XL. You can locate the full article on our web-site under "LTL-M" and "VTI test reports".

Video support

DELTA is together with LKF / Geveko finalising a video of road markings. The video will in nine minutes explain the most important features around markings as well as inform you how their performance is measured and evaluated. When ready, the video will be made available on www.roadsensors.com.

In parallel, we are preparing a small training video of the Marking Thickness Gauge. This video will also be available on the web-site when launched.

Instrument USB stick

I asked many of you earlier this year if our customers are ready and prepared to access instrument manuals and software via the roadsensors web-site. I did not have many responses but those received were negative. Based on this DELTA has decided to keep the instrument USB stick delivered with new instruments.

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